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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/682,223	10/09/2003	Mark A. Schubert	SP-1665.1 US	8111

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EXAMINER

CHU, HELEN OK

ART UNIT	PAPER NUMBER
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1745

DATE MAILED: 10/11/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/682,223	Applicant(s) SCHUBERT ET AL.	
	Examiner Helen O. Chu	Art Unit 1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 5 is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 09 October 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|--|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>11/10/2003, 3/25/2005</u> | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claim 1-12,18-21 are rejected under 35 U.S.C. 103(a) as obvious Schubert et al. (US Publication 2003/0118902) in view of Chen et al. (US Patent 6,236,205).

3. In regard to claims 1-5, the Schubert et al. reference discloses an electrochemical cell with an electrode assembly (Paragraph 37) metal containers (Paragraph 2), metal covers (Paragraph 21). The sealant is made of thermoplastic material comprising of polyolefin matrix (Applicants' thermoplastic resin) which seals an aperture in at least one of the container and the first cover and forming at least a part of the pressure relief vent for releasing pressure (Paragraph 44). The Schubert et al. reference does not disclose a thermo-stabilizing filler made of E-glass, however, the Chen et al. reference discloses a gasket made of 20% E-glass in a suitable thermoplastic resin matrix made of polyphenylene sulfide (Column 6, Lines 36-40) for effective reinforcement (Column 5 Line 5). Therefore, it would have been obvious to one of ordinary skill at the time the invention was made to incorporate the gasket with 20% E-glass as taught by Chen et al. into the sealant of the electrochemical battery as taught

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by Schubert et al. to have a strong sealant that would reduce electrolyte leakage of the battery.

In regards to claim 6, the Schubert et al. reference discloses a second seal thermoplastic seal member providing a seal between the container and the metal cover (Figure 5, Component 32).

In regards to claim 7, the Schubert et al. reference discloses a hollow cylindrical shape which is disposed within the aperture in the first metal cover (Figure 5, Component 32)

In regard to claim 8 and 9, the Schubert et al. reference illustrates pressure relief vent (Figure 5, Component 46 and 48) within the first thermoplastic seal member (Component 32) and the first cover (Component 34). The first thermoplastic seal member and the sphere plug cooperate to form a compression seal for the aperture.

In regard to claims 12, the Shubert et al. reference discloses a non-aqueous electrolyte (Paragraph 42)

In regard to claims 10 and 11, according to the Shubert et al. reference, the vent bushing may be a seal member (Paragraph 42) since the vent ball and vent bushing is part of the ventilation device as taught by Shubert et al. it would have been obvious to one of ordinary skill at the time the invention was made to produces the vent ball with the same material as that of the vent bushing, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. *In re Leshin*, 125 USPQ 416.

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4. Claims 13-17, 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schubert et al. in view of Chen et al., as applied to claim 12, and further in view of Bakos et al. (US Patent 4,804,595).

The Schubert et al. reference in view of Chen et al. discloses an electrochemical battery as applied to claim 12 and further incorporated herein. The Shubert et al. and Chen et al. reference also discloses a lithium battery (Paragraph 32) but does not disclose some of the specific elements in a lithium battery. However, the Bakos et al. reference discloses a lithium battery with a lithium anode, a manganese cathode and tetrahydrofuran as an organic electrolyte (boiling point of 62 °C) which generally conferred to superior electrical performance to lithium battery when present as the ether component of a lithium battery electrolyte. Therefore, it would have been obvious to one of ordinary skill at the time the invention was made to use the lithium battery component as taught by Bakos et al. as the lithium cell as disclose by Schubert to enhance performance in a battery or an electrochemical cell.

5. Claims 24 and 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schubert et al. in view of Chen et al., as applied to claim 18, and further in view of Yasuda et al. (US Patent 4,501,805).

The Schubert et al. reference in view of Chen et al. discloses an electrochemical battery as applied to claim 18 and further incorporated herein. The Shubert et al. and Chen et al. reference also discloses a lithium battery (Paragraph 32) with gaskets made of thermoplastic resin and 20% thermo-stabilizing filler but does not disclose the thermoplastic resin material is ethylene-tetrafluoroethylene. However, the Yasuda et al.

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reference discloses a gasket made of ethylene-tetrafluoroethylene for insulation (Column 1, Lines 39-51). Therefore, it would have been obvious to one of ordinary skill in the art at the time in the invention was made to incorporate ethylene-tetrafluoroethylene as disclosed by Yasuda et al. into the gasket as disclosed by Shubert et al. and Chen et al. to prevent electrolyte creepage.

It is noted that claims 22 are product-by-process claims. "Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process." In re Thorpe, 777 F. 2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). Since product is similar to that of the Applicant's, Applicant's process is not given patentable weight in this claim.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helen O. Chu whose telephone number is (571) 272-5162. The examiner can normally be reached on Monday-Friday 8am-4:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Ryan can be reached on (571) 272-1292. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HOC

A handwritten signature in black ink, reading "Susy Tsang-Foster". The signature is written in a cursive, flowing style.

SUSYTSANG-FOSTER
PRIMARY EXAMINER